# LINGER LONGER WATER ASSOCIATION (PWS #1090078) SOURCE WATER ASSESSMENT REPORT

June 13, 2001



#### State of Idaho Department of Environmental Quality

**Disclaimer:** This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for the Linger Longer Water Association (PWS #1090078)*, located in Bonner County, Idaho, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any documented potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. The results should <u>not be</u> used as an absolute measure of risk and are not intended to undermine the confidence in your water system.

The Linger Longer Water Association drinking water system consists of one well, which was drilled in 1994. The well is maintained appropriately. The water system tests quarterly for total coliform bacteria. Samples have been negative for the presence of total coliform bacteria since the inception of testing. The water system also tests for nitrate annually and nitrite every nine years. Testing has revealed both to be at acceptable levels. Well water is not treated, as treatment is not necessary at this time.

The well's system construction score is low. This reflects a properly constructed well that provides a measure of protection against contamination. The well is 318' deep and uses .250" thick steel casing. The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWSs) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWSs follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. Table 1 of the *Recommended Standards for Water Works (1997)* states that 6-inch steel casing requires a thickness of 0.280 inches. The well also uses 4" casing. The well is perforated from 278' to 318' and sealed with bentonite to a depth of 29'. Both the wellhead and surface seal are maintained appropriately. The well is located outside of the 100-year floodplain.

The well's hydrologic sensitivity is also low. Soils surrounding the wellhead are poorly drained and consist mostly of hard granite. This acts as a barrier to contaminants moving through the soil.

The well was assigned a low potential contaminant/land use score. There is only one documented potential contaminant site located within the well's source water assessment area. The potential contaminant site is an effluent tank located approximately 100' away from the well. The tank is a potential source of microbes and nitrate.

The well's overall susceptibility score is low. A copy of the susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary. Information regarding the potential contaminants within the 1,000' boundary have been summarized and included in Table 1.

Table 1.

SITE#	Source Description	Source of Information	Potential Contaminants	
1	Effluent Tank	Enhanced Inventory	Microbial, IOC	

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Figure 1. Linger Longer Water Association Delineation Map and Potential Contaminant Source Locations IDANO FALLS Well 116 54'6 0.25 0.25 Miles Legend BARA TIME EL SIN (EPCRA) PWS# 1090078 CERCUSSIO Well

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Linger Longer Water Association should focus source water protection activities on implementation of practices aimed at maintaining the low density of potential contaminant sites within the well's source water assessment area. The water system operator may want to establish a dialogue with state and local agencies related to maintaining this low density. The water system should also consider developing a source water protection plan. The plan should contain a public education component to notify local residents of the well's location and the boundaries of the well's source water assessment area. Residents should be advised of proper septic tank maintenance procedures and of recommended methods for the use and storage of household hazardous wastes. A contingency plan should also be included in the system's source water protection plan. The contingency plan should outline the steps to be taken in the event of a drinking water emergency and identify an alternative source of water should the well ever become contaminated. Lastly, the water system operator must ensure that a backflow prevention program is protecting the water system, as requested per IDEQ's 1999 sanitary survey of the well. The same survey also instructed the water system operator to disconnect the surface water intake from the current water system. These items should be addressed immediately, if not already completed. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact Alan Miller at the Coeur d'Alene regional IDEQ office at (208) 769-1422.

DEQ website:

http://www.deq.state.id.us

#### **Attachment A**

## Linger Longer Water Association Susceptibility Analysis Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.375)

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

> 13 = High Susceptibility

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Public Water System Number 1090078

System Construction		SCORE			
Drill Date	10/18/1994				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1999			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	YES	0			
	Total System Construction Score	1			
Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
	Total Hydrologic Score	1			
		IOC	VOC	SOC	Microbia
Potential Contaminant / Land Use - ZONE 1A		Score	Score	Score	Score
Land Use Zone 1A	OTHER	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Co	ntaminant Source/Land Use Score - Zone 1A	0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	1	0	0	1
(Score = # Sources X 2 ) 8 Points Maximum		2	0	0	2
Sources of Class II or III leachable contaminants or	YES	1	0	0	
4 Points Maximum		1	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
	ontaminant Source / Land Use Score - Zone 1B	3	0	0	2
Cumulative Potential Contaminant / Land Use Score			0	0	2
Final Susceptibility Source Score		3	2	2	3
Final Well Ranking		Low	Low	Low	Low

### POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

<u>AST (Aboveground Storage Tanks)</u> – Sites with aboveground storage tanks.

<u>Business Mailing List</u> – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

<u>CERCLIS</u> – This includes sites considered for listing under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). CERCLA, more commonly known as ASuperfund@ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

<u>Cyanide Site</u> – DEQ permitted and known historical sites/facilities using cyanide.

<u>Dairy</u> – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

<u>Deep Injection Well</u> – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

**Enhanced Inventory** – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

**<u>Floodplain</u>** – This is a coverage of the 100year floodplains.

<u>Group 1 Sites</u> – These are sites that show elevated levels of contaminants and are not within the priority one areas.

<u>Inorganic Priority Area</u> – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

<u>Landfill</u> – Areas of open and closed municipal and non-municipal landfills.

<u>LUST (Leaking Underground Storage Tank)</u> – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

<u>Mines and Quarries</u> – Mines and quarries permitted through the Idaho Department of Lands.)

<u>Nitrate Priority Area</u> – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

#### NPDES (National Pollutant Discharge Elimination System)

– Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

<u>Organic Priority Areas</u> – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

**Recharge Point** – This includes active, proposed, and possible recharge sites on the Snake River Plain.

**RICRIS** – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

<u>UST (Underground Storage Tank)</u> – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

<u>Wastewater Land Applications Sites</u> – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

<u>Wellheads</u> – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

**NOTE:** Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.